Claims

What is claimed is:

1. An actuator body for use in an actuator assembly carrying a transducer over a data storage disc, the actuator body comprising:

an actuator arm section for supporting the transducer; and

a fantail section having a first leg and a second leg, the first leg having a first thermal restraint feature, and the second leg having a second thermal restraint feature, wherein the first and second thermal restraint features are configured to engage an over-mold when the over-mold is over-molded over the fantail section, and the first and second thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion.

2. The actuator body as in Claim 1, wherein the first leg further includes a third thermal restraint feature, and the second leg further includes a fourth thermal restraint feature, and the third and fourth thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion.

3. The actuator body as in Claim 1, wherein the first thermal restraint feature comprises a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a second hole that is in the second leg and extends through the second leg, and wherein the first hole and the second hole are arranged to engage the over-mold such that the over-mold extends through both the first hole and the second hole.

4. The actuator body as in Claim 1, wherein the first thermal restraint feature comprises a first pin, and the second thermal restraint feature comprises a second pin.

5. The actuator body as in Claim 1, wherein the first thermal restraint feature comprises a first wall, and the second thermal restraint feature comprises a second wall.

6. The actuator body as in Claim 1, wherein the first thermal restraint feature has a circular shape, and the second thermal restraint feature has a circular shape.

7. The actuator body as in Claim 1, wherein the first thermal restraint feature is positioned approximately equidistant distal and proximal ends of the first leg, and the second thermal restraint feature is positioned approximate equidistant distal and proximal ends of the second leg.

8. The actuator body as in Claim 2, wherein the first thermal restraint feature comprises a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a second hole that is in the second leg that extends through the second leg, the third thermal restraint feature comprises a third hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a fourth hole that is in the second leg and extends through the second leg, and wherein the first, second, third, and fourth holes are arranged to engage the over-mold such that the over-mold extends through the first, second, third, and fourth holes.

9. The actuator body as in Claim 2, wherein the distance from the distal end of the first leg and the thermal restraint feature that is closest the distal end of the first leg, the distance from the proximal end of the first leg and the thermal restraint feature that is closest to the proximal end of the first leg, and the distance of each of the thermal restraint features on the first leg from each other are all approximately the same, and wherein the distal end of the second leg and the thermal restraint feature that is closest the distal end of the second leg, the distance from the proximal end of the second leg and the thermal restraint feature that is closest to the proximal end of the second leg, and the distance of each of the

thermal restraint features on the second leg from each other are all approximately the same.

10. An actuator assembly for use in a data storage device comprising:

a voice coil;

an actuator having a fantail section including a first leg and a second leg forming a yoke for receiving the voice coil therebetween, wherein the first leg has a first thermal restraint feature, and the second leg has a second thermal restraint feature; and

an over-mold on the fantail section that surrounds the first and second legs and holds the voice coil, wherein the first and second thermal restraint features are located such that the over-mold engages with the first and second thermal restraint features to prevent the over-mold from separating from the actuator as a result of the over-mold and the actuator each having a different coefficient of thermal expansion.

11. The actuator assembly as in Claim 10, wherein the first leg further includes a third thermal restraint feature, and the second leg further includes a fourth thermal restraint feature, and the third and fourth thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator each having a different coefficient of thermal expansion.

12. The actuator assembly as in Claim 10, wherein the first thermal restraint feature comprises a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a second hole that is in the second leg and extends through the second leg, and the over-mold extends through both the first hole and the second hole.

13. The actuator assembly as in Claim 10, wherein the first thermal restraint feature comprises a first pin, and the second thermal restraint feature comprises a second pin.

14. The actuator assembly as in Claim 10, wherein the first thermal restraint feature comprises a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a second hole that is in the second leg that extends through the second leg, the third thermal restraint feature comprises a third hole that is in the first leg and extends through the first leg, the second thermal restraint feature comprises a fourth hole that is in the second leg and extends through the second leg, and the over-mold extends through the first, second, third, and fourth holes.

15. The actuator assembly as in Claim 14, wherein the distance from the distal end of the first leg and the hole that is closest the distal end of the first leg, the distance from the proximal end of the first leg and hole that is closest to the proximal end of the first leg, and the distance of each of the holes on the first leg from each other are all approximately the same, and wherein the distal end of the second leg and the hole that is closest the distal end of the second leg, the distance from the proximal end of the second leg and the hole that is closest to the proximal end of the second leg, and the distance of each of the holes on the second leg from each other are all approximately the same.

16. An actuator body for use in an actuator assembly carrying a transducer over a data storage disc, the actuator body comprising:

an actuator arm section for supporting the transducer; and

a means for reducing thermal stress that is configured to engage an over-mold, wherein the reducing means is configured to reduce thermal stress caused by the over-mold and the actuator each having a different coefficient of thermal expansion.

17. The actuator body as in Claim 16, wherein the reducing means comprises a plurality of holes in the actuator body, wherein each of the plurality of

holes are located such that the over-mold engages with the plurality of holes to prevent the over-mold from separating from the actuator as a result of the over-mold and the actuator each having a different coefficient of thermal expansion, and each of the plurality of holes extend through the actuator.

18. The actuator body as in Claim 16, wherein each of the plurality of holes has a circular shape.

19. The actuator body as in Claim 16, wherein the actuator body further comprises a fantail section, the fantail section comprises a first and second leg, a first of the plurality of holes is positioned on the first leg, and a second of the plurality of holes is positioned on the second leg.

20. The actuator body as in Claim 16, wherein the reducing means comprises a plurality of pins in the actuator, wherein each of the plurality of pins are located such that the over-mold engages with the plurality of pins to prevent the over-mold from separating from the actuator as a result of the over-mold and the actuator each having a different coefficient of thermal expansion.